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An exploratory investigation into the effects of unit pricing on food shopping behavior.

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AN EXPLORATORY INVESTIGATION INTO THE EFFECTS OF UNIT PRICING ON FOOD SHOPPING BEHAVIOR

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C H A P T E R I

BACKGROUND

The first legislation concerned with regulating packaging and administering standards for quality and quantity of consumer goods was the Fair Packaging and Labeling Act of 1966. Before this, confusing labeling practices were followed by many companies. Terminology such as "Super Half Quart" or "Giant Economy Size" was abundant in describing package quantity.

The Act attempted to clear up the confusion that existed on the marketshelf. Its first requirement was that the package state its content and weight, and the name of the manufacturer or distributor. The Act also granted the Federal Government the power to establish regulations concerning package sizes and weights.

The responsibility of enforcing the Act was taken by three governmental departments. The Food and Drug Administration had jurisdiction over food packages; the Federal Trade Commission dealt with non-food packages. The Commerce Department handled voluntary standards. This division of authority has not worked out as well as it could have, although many reforms have been instituted. One hindrance to the enforcement of the Act is the occurrence of jurisdictional fights between State and Federal Governments. Governmental agencies also have been known to shift their responsibilities to industry, while industrial standards have been

too few.

These few changes instituted by industry are a step in the right direction, but come short of reaching its potential ability to clarify the shopper's decision-making process. For instance, the number of toothpaste sizes decreased from 57 to 5. These sizes were classified as personel (1.75 oz.), medium (3.25 oz.), large (5.00 oz.), economy (6.75 oz.), and family (8.75 oz.) [9, p. 17]. The quantities selected for these five sizes are awkward and inhibit accurate price comparisons. Weights such as 2 oz., 4 oz., 6 oz., 8 oz., and 10 oz., would make this innovation more than just a gesture. Another similar action was the decrease in the number of paper towel sizes, from 33 to 8. These remaining eight sizes (85, 100, 120, 125, 140, 165, 170, 200 sq. ft. per package) also make it difficult for the consumer to make accurate price comparisons. Rolls of 75, 100, 125, 150, 175 and 200 sq. ft. per package might eliminate some of the existing confusion [7, p. 6].

Another failure of industry to fully cooperate with the Act is the practice of packaging to price. This is instituted in two ways. The first is determining the package size by price. The second is more ethically questionable. It is the practice of keeping the price and package the same, but shrinking the ney contents of the package. One instance of this was enacted by Nabisco Shredded Wheat. Without changing the price or the size of the box, the contents of the package

decreased from 12 oz. in 1961 to 10-1/2 oz. in 1965 to 10 oz. in 1969 [7, p. 8].

Although the Packaging and Labeling Act has attempted to clear up the confusion on the supermarket shelf, there is reason to believe that confusion still remains. The consumer is still in a quandry deciding what items will give him the most for his money. Unit pricing is an attempt to help clarify the above obstructions to the consumer's decision-making abilities.

There are two major concepts which the supermarket owner uses under the term "unit pricing." The first brings about the elimination of multiple-unit pricing. This minor improvement may end such pricing practices as 2/.59 or 3/$1.00. The important provision is that price is to be stated in cost per standard unit of measure (pound, ounce, sq. ft., or numerical count) as well as the price for the entire package. An example of unit price usage would be where a 10 oz. can of juice at 59¢ a can is compared to a 16 oz. can at 82¢ a can. The former's unit price is 5.9¢ per oz., the latter's 5.1¢ per oz. Thus, by buying the 16 oz. can, the consumer saves .8¢ per oz., or 12.8¢ per pound (7, p. 9].

There has been little empirical research to date that indicates the impact that unit pricing has had on shopping behavior. The research available is mostly inconclusive due to the presence of a number of limitations. These limitations include the short duration of the experiments. As

diffusion of innovation studies show, there is a time lag between the introduction and the majority acceptance of new innovation. Without a proper amount of time to allow for the gradual process of consumer awareness, the measurements become incomplete. The results of these experiments lend themselves to bias. Another factor limiting accurate measurement is the utilization of the smallest possible unit of measurement for the unit price. As these measurements were usually smaller than the actual size, the perceived differences in price become less substantial [9, p. 19]. Another major fault of previous research lies in the lack of imposing controls over the additional information available to the shoppers. The unit price labeling techniques used by the various researchers were highly diversified. Among those devices used were computer labels (which may be confused with inventory numbers), large shelf tags, conversion tables, computer wheels, large end-of-aisle banners and small placards [9, p. 20]. The shoppers' perception of unit pricing can be totally changed depending on the type of labeling used. Still another inconsistency is apparent in that the experimental settings varied. The only apparent consistency was that all the studies reviewed took place under actual operating conditions. Some studies used only two or three product groups while others used hundreds of items [9, p. 20].

The following is a list of the previous research done to date accompanied by a short description of each one.

Jewel Food Stores. Between January and July, 1970, Jewel Food Stores established a cost per measure program in all of their 258 Chicago area stores. In July, 7.4% of the interviewed customers used unit pricing. An overall awareness level of 63% was arrived at [2, p. 64]. Analysis of warehouse withdrawals during the first 8 weeks showed no major swing to lower unit priced products [9, p. 17].

Stop and Shop. During May and June, 1970, Stop and Shop used unit pricing on three products. The findings were as follows:

a) Purchase decisions were more affected by budget and brand preference factors than by knowledge of unit pricing.

b) Usage and awareness was much greater among high income shoppers than low income shoppers.

c) Unit pricing is more likely to be used to change size than to change brands.

d) Nine percent of the respondents used unit pricing [3].

Safeway Stores. In April, 1970, Safeway Stores tested unit pricing on 16 products in two stores. It was found that 38% of the shoppers from the suburban store (higher education) used unit pricing while 20% usage was recorded in the inner-city store. However, 26.5% of the suburban shoppers reported that they used unit pricing on one of the control products in which unit pricing was not used. Only 3% of the inner-city shoppers indicated that they used unit pricing on

control items. In effect, this shifted the figures to 17% inner-city usage and 11.5% suburban usage. This suggests that the low income, low educated shoppers may be more aware of price [5].

Kroger Company. Kroger Company tested unit pricing for four months in ten stores, using twelve product families. Forty-eight percent of the shoppers indicated that they noticed and understood unit pricing labels. It was reported that 31% of the total used unit pricing. Definite bias may have affacted these figures, as the interviewer pointed to the unit pricing labels when asking the shopper if he or she had seen them. A slight tendency towards purchasing higher unit priced items was found. Product movement data also showed that there was no difference in the effect that unit pricing information had on the purchasing decisions of the better educated, more affluent shoppers, compared to shoppers from poorer neighborhoods [8].

King Soopers. In September, 1970, King Sooper tested unit pricing in 29 Colorado supermarkets. In November, a telephone survey was conducted. It was found that 82% of the regular King Sooper shoppers and 67.9% of all respondents were aware of the unit pricing program. 35% of those who used unit pricing switched brands. Also, a significant appeal towards unit pricing was found to exist among younger shoppers and in households where the head was a manager or a professional [6].

The above studies offer only clues as to what the true status of unit pricing is today. The main areas that this research is concerned with deal with the extent of the shoppers' awareness of unit pricing and its subsequent utilization; who, in fact, is using the unit pricing, and how does unit pricing affect shopping habits? As exhibited by the above studies, a variety of answers is given.

In regards to the consumer awareness of unit pricing, figures of 25% (Safeway) to 82% (King Sooper) are arrived at. When trying to measure the percentage of unit pricing users, the figures vary from 7.4% (Stop and Shop) to 31% (Kroger). This wide array of figures leaves no real feeling for what the actual awareness level is, and subsequently, what is the usage level of unit pricing by food shoppers.

As far as the measurement of who is using unit pricing is concerned, there are very few tangible results to compare. The Stop and Shop study found that usage and awareness was much greater in upper income shoppers. The Kroger study, however, found that there was no real effect that unit pricing has on this very same group of shoppers. Kroger Company did find, however, that a greater percentage of those who use unit pricing, from the total number of shoppers aware of unit pricing, are lower income, lower educated shoppers [2, p. 64]. This same conclusion was arrived at in the Safeway study. The fact that the awareness level of unit pricing in the lower socio-economic groups may be extremely

low, may make this finding somewhat insignificant. Again, more accurate awareness and usage figures are needed.

The findings available on the effects of unit pricing on shopping behavior are also incomplete. Those findings that do exist are inconsistent. King Soopers Stores reported that 35% of those shoppers aware of unit pricing switched brands because of it, while the Safeway study found that only 10% switched brands. Of those shoppers who had switched, Kroger found a slight switch to higher unit priced items [9, p. 18]. The King Soopers study found that about half the brand-switching reported was to the store brands. These findings still leave us with the questions of 1) how many switches are made as a result of unit pricing, and 2) what kind of switches are made.

Summary

The Fair Packaging and Labeling Act of 1966 attempted to clear up the confusion that existed on the supermarket shelves brought about by questionable labeling practices. As the Act's achievements fell short of complete success, unit pricing legislation was called on to restore clarity to the food shopper's decision making process. By displaying price per unit of measurement, as well as the total price, more accurate price comparisons can be made.

The limited empirical research done to date has shed little light on what impact unit pricing has had on food

shopping behavior. This research is mostly inconclusive and inconsistent.

In general, it can be said that it is not known what role unit pricing now plays in the consumer's decision. Has it become the salient factor in the decision making process, or is it minimized by budget and brand preference factors, as the Stop and Shop study suggests?

C H A P T E R II

OBJECTIVES AND RESEARCH METHODOLOGY

Objectives

It is the purpose of this thesis to investigate the effect of unit pricing on the behavior of food shoppers. As illustrated in the preceding chapter, no objective studies have previously been conducted to satisfy this goal. Unit pricing has been implemented in Massachusetts since October, 1971. No study of this type has been conducted where unit pricing has been legislated. This eliminates the bias that occurred whereby selected test stores, as well as selected items, had to represent the parameters of the experiments. Because of the constraints of time and money, earlier studies were restricted to a short experimentation period. As unit pricing has been enforced in Massachusetts for almost two years, a study at this time eliminates some of these limitations. There now exists a time lag whereby the shopper should have had a significant amount of time to develop an awareness of unit pricing.

This study is an exploratory descriptive study. Its major purpose is to determine the present status of unit pricing and identify the problems which are associated with unit pricing. It is primarily an information-seeking device with the objective of specifying future avenues of research.

There are five main areas of concentration that this

research is concerned with. The first area deals with the awareness of unit pricing by the food shopper. Before unit pricing is used, the food shopper must first realize what unit pricing is and know how to use it. With the multitude of numbers exposed to the shopper on a food shopping trip, it is conceivable that unit pricing labels may be mistaken as inventory numbers or just overlooked to avoid confusion. It is here where education plays a big role. If food shoppers do not pick up the meaning of unit pricing from studying the labels or by other means, additional effort must be made to educate them.

The next area to be studied is the level of usage of unit pricing by the food shopper. It is important to know to what extent unit pricing is being used. High usage rates would indicate that unit pricing is successful in Massachusetts and may prompt other states to follow suit by legislating unit pricing. Low usage rates would suggest a reevaluation of unit pricing practices to determine possible changes of policy.

Third, it is crucial to determine who utilizes unit pricing the most. All groups of food shoppers that display low awareness and usage of unit pricing should be studied to determine what steps, if any, can be taken to facilitate the usage of unit pricing. It is especially important that those shoppers who are members of the lower socio-economic stratas of society are able to utilize unit pricing. This

study will give an indication of the level of awareness and usage of unit pricing displayed by food shoppers from the various demographic categories.

The question of how unit pricing is used is the fourth factor that is studied. Is the food shopper making changes in purchasing decisions because of unit price comparisons? If these changes are taking place, an indication is given that unit pricing is influencing food shopping behavior. It follows that the more changes that occur because of unit pricing, the more evidence for the success of unit pricing is displayed. The frequency of changes is only an indication of success, however, as the comparison of unit prices may act to fortify previous purchasing decisions by the food shopper.

The last area of concentration is the climate of the general attitudes displayed by the respondents. For unit pricing to be successful, the food shopper must be motivated to use it. Most of the questions is this area deal with various indications of price consciousness. If food shoppers reveal a high degree of price consciousness, then the motivation to save money may facilitate the use of unit pricing.

Research Methodology

Because of the existing constraints of time and money, a mail questionnaire (see Appendix A) was utilized to gather information. The questionnaire consisted of 34 questions and was divided into five major sections. The first section

was an open ended question, asking the respondent what unit pricing meant to him or her. The next 16 questions asked the respondent to agree or disagree (on a 7 point scale from strongly agree to strongly disagree) on various statements dealing with opinions, usage and general shopping habits. The third section, consisting of 7 questions, measured frequencies (on a 5 point scale from never to always) that are involved with usage and shopping habits. The next four questions allow the respondent to fill in the blanks, indicating the where, the how long, and the how much of their shopping trip. The last section collected demographic data about the respondent. Included in the mailing was an introductory letter and a self-addressed, postage paid envelope to facilitate response.

To get a fairly equal representation of the different levels of socio-economic shoppers, the questionnaires were sent to towns that have a predominant population in each group. The towns that were surveyed were Amherst, Hadley and Northampton-Florence. The sample population was randomly selected from the telephone book. Every 60th name was chosen, as long as it was a private residence and located in one of the aforementioned towns. If these conditions were not met, the next name down would be considered, until a specified respondent was chosen.

Five hundred questionnaires were sent out with an expected return of 20%. This figure was arrived at by using

the history of questionnaire returns on similar projects as a base. A total of 110 questionnaires were returned. Twenty-three questionnaires never reached the respondents, mostly because of improper or insufficient addresses. Another 7 questionnaires were never sent out, due to a malfunction of the envelope-stuffing machine. Thus, only 470 questionnaires reached the desired respondents, making the actual percentage returned 23.4.

The first topic dealt with was the degree of consumer awareness of unit pricing. To measure awareness, three questions were asked on the questionnaire (see Appendix A). The first question on the questionnaire was an open-ended question asking the respondent to describe what unit pricing meant to him or her. This allowed the respondent to articulate the extent of his or her knowledge related to unit pricing. To back up this question, two statements, numbers 4 and 5, were given (on a 7 point scale, from strongly agree to strongly disagree) postulating that unit pricing is confusing and that it is not completely understood.

The next area of concern was the extent of utilization of unit pricing by shoppers. Two questions related to this area were numbers 2 and 3, which asked the respondent (on the 7 point scale) if unit pricing labels are easy to read and make shopping easier and less time consuming. A high frequency of disagreement to these questions may indicate a lower level of usage. Another related question, number 6

(on the 7 point scale) asked the respondent if unit pricing has helped him or her to save money on grocery purchases. A series of statements (on a 5 point scale from always to never) dealing more specifically with the area of goods that unit pricing is used on was also included in the questionnaire. They were comprised of numbers 19 through 23 on the questionnaire. They called for the degree of use on all groceries, on dairy products, on meat, poultry or fish products, on canned food products, and on non-food items. This offers a more precise portrayal of the usage of unit pricing.

The standard demographic data was sought to help conclude who uses unit pricing. The questions dealt with the respondent's age, the total family income, the number of years of education, occupation and spouse's occupation.

The next problem was measuring the effect that unit pricing has had on shopping behavior. The first statement (on the 7 point scale) was designed to provide background information regarding the potential effects of unit pricing on shopping behavior. This was question number 10, and dealt in general with the degree of brand name buying. If the respondent showed a high preference for brand name items, unit pricing may have little effect on his or her shopping decision. This question was immediately followed by two, more direct, questions dealing with the current usage of unit pricing. They asked to what extent, if any (on the 7 point scale), the respondent had changed brands or the usual purchased

quantity because of unit pricing.

The last major element studied was a measurement of the general climate of attitudes and shopping habits that may or may not facilitate consumer usage of unit pricing. The majority of questions dealt with the degree of price consciousness of the food shopper. First, statements number 7 and 8 (on the 7 point scale) asked to what degree brand name is an important indicator of quality when buying food and non-food products. If these were answered in the strong affirmative, it follows that the import of unit pricing may be minimized. Additional statements, numbers 14 through 17 (on the 7 point scale), were given to further measure the degree of price consciousness of the respondents. They sought to find out the extent to which the shopper checked newspaper grocery advertisements for specials, redeemed coupons, prepared a shopping list, and compared prices before making a selection. The last statement in this group, which was number 18, asked in general if the respondents felt that grocery prices were too high. If the response to this grouping was strongly affirmative, a high degree of price consciousness is displayed, making a more favorable climate for the adoption of unit pricing. Finally, there were two statements (on the 7 point scale) designed to exact general attitudes about the shopping trip. The first, number 9, asked if the respondent enjoys shopping because he or she often meets friends and talks to them. The next, number 13, asked if

shopping is boring and time consuming. The more pleasant the shopping trip, the less of a hurry the shopper will be in to get out of the store. Consequently, the more time the shopper spends in the store, the more apt he or she will be to use unit pricing.

Summary

It is the purpose of this thesis to investigate the effect of unit pricing on the behavior of food shoppers. This is the first study of this nature since the legislation of unit pricing in Massachusetts in 1971.

A mail questionnaire was employed to gather the necessary information. The questionnaire was comprised of five major categories of measurement, consisting of the degree of awareness to unit pricing, the extent of its utilization, how it is used, the food shoppers' general attitudes concerning price, and who uses unit pricing information.

C H A P T E R III

RESULTS AND ANALYSIS

As the questionnaires were returned, the raw frequencies of the responses were charted on a 7 column work book. Means and standard deviations were then calculated for each question where interval scaling was employed. The results of these calculation are displayed in Tables 3-2, 3-3 and 3-4. Table 3-2 displays the distribution of responses of questions 2 through 18, which deal with the attitudes and opinions of the respondents that are concerned with unit pricing and food shopping in general. These statements are on a 7 point scale from "strongly agree" to "strongly disagree." Table 3-3 displays the distribution of responses of questions 19 through 23 which deal with the frequency of use of unit pricing on the various food and non-food categories in the supermarket. These statements are on a 5 point scale from "always" to "never." Table 3-4 displays the distribution of responses of the demographic questions. As the two question concerning occupation do not elicit answers on an interval scale, means and standard deviations could not be calculated. Following each table is an analysis of the results for the preceding table.

The first question, being open-ended, also does not permit the calculations of the mean and standard deviation. Table 3-1 displays the distribution of responses for this

question. Following Table 3-1 is an interpretation of the results for the question.

The frequencies do not always add up to the sample size of 110 because six respondents apparently did not notice page 2 of the questionnaire. Since page 2 is on the back of page 1, a note to turn the page on the bottom of page 1 would have been appropriate. The next reason for non-response was the unwillingness of some respondents to divulge various demographic data, especially total family income. Occasionally, throughout the questionnaire, responses were left out due either to neglect or lack of an answer.

Six questions on the questionnaire are omitted from the treatment of analysis. These questions lack direct relevancy to the objectives of this research. The purpose of the inclusion of these questions was to give additional information for future research along these lines. Two of the discussed questions are numbers 24 and 25, which are included in Table 3-3 but are not subsequently analyzed. The other questions are number 26 through 29. Question 26 asks the respondent where he or she does the majority of the grocery shopping. The response is as follows: Louis Foods, 14; Stop and Shop, 61; Big Y, 23; A&P, 4; First National Foods, 3; Food Mart, 5; others, 12. Question 27 shows that the average distance traveled is 3.5 miles one way to the grocery store. Question 28 displays an average expenditure of $30.06 each week for food. Question 29 shows that, on the

average, it takes 41 minutes for the respondents to complete their grocery shopping in the store.

The next process was to run cross tabulations between questions dealing with the understanding and usage of unit pricing by the respondents and the demographic questions. This procedure is designed to satisfy some basic objectives of this research. It will display who, in fact, is understanding unit pricing and benefiting from it the most. Questions 2, 4, 5, 6, 11, 12, and 19 are cross tabulated with the demographic variables and displayed in Tables 3-5 through 3-39. Preceding each set of five tables where each question has been cross tabulated with the various demographics, an analysis is presented.

Question 1. "In your own words, please describe what unit pricing means to you." The question was incorrectly worded, as the desired answer is in the form of a definition. By asking the respondent to reply to "what unit pricing means" to him or her, 23 non-definitive answers were given (Table 3-1). It is impossible to determine what percentage of the respondents giving these answers can define unit pricing correctly. Of those respondents that did attempt to define unit pricing, 74% gave accurate definitions. This figure indicates a relatively high level of awareness. However, since the non-definitive answers are not indicative of an accurate definition, it loses some of its significance.

Table 3-1

Distribution of Response to Question 1
("In your own words, please describe
what unit pricing means to you.")

				Non-definitive answers		
Accurate Definition[1]	General Idea[2]	Wrong Definition	Don't Know	Positive[3]	Negative[4]	Neither positive nor negative[5]
56	17	3	6	13	4	6

[1]An accurate definition includes the facts that unit pricing supplies a cost per unit of measurement as well as the regular price displayed.

[2]Answers that fall into this category do not mention the display of a cost per unit of measurement, but do mention unit pricing as being a device to facilitate price comparisons.

[3]A positive, non-definitive answer would be along the lines of "Unit pricing is a great help to the shopper."

[4]A negative, non-definitive answer would be along the lines of "Unit pricing is a farce."

[5]Most of the answers in this category were statements that the respondent didn't use unit pricing.

Table 3-2

Distribution of Responses to Questions 2 Through 18

Question Number	Strongly Agree[a]	Moderately Agree	Slightly Agree	No Opinion	Slightly Disagree	Moderately Disagree	Strongly Disagree	Mean	Standard Deviation
2	12	33	12	11	9	18	13	3.28	2.03
3	22	19	21	17	9	13	8	3.61	1.90
4	6	7	20	17	10	17	31	2.12	1.91
5	4	7	11	15	6	17	42	1.61	1.88
6	26	24	23	17	6	5	8	3.97	1.81
7	15	20	21	10	12	16	16	3.13	2.00
8	12	21	25	13	10	14	15	3.18	1.95
9	8	12	11	23	5	9	42	2.17	2.10
10	5	8	10	3	13	26	45	1.56	1.87
11	15	18	25	18	3	6	17	3.39	1.98
12	24	20	25	10	6	3	17	3.77	2.00
13	19	9	22	13	9	16	25	2.83	2.16
14	36	16	19	7	3	10	13	3.91	2.15
15	44	20	22	5	3	5	4	4.64	1.66
16	56	17	11	4	8	5	3	4.78	1.72
17	66	16	14	3	2	1	2	5.25	1.28
18	59	19	10	8	1	2	3	5.07	1.46

[a]The assigned scale values range from 6 for the "strongly agree" category to 0 for the "strongly disagree" category.

Questions 2-18. A wide distribution of answers with a slight emphasis on agreement is characteristic of question 2 ("Unit pricing labels are easy to read."). The standard deviation of 2.03 indicates a lack of strong agreement or disagreement to this question as the response distribution shows (Table 3-2).

The mean response to question 3 (3.61) shows that the respondents slightly agree that unit pricing labels make shopping easier and less time consuming. This figure is deluded in significance when compared to the number of agreements in relation to the number of disagreements. The mean, as a weighted average, does not display an accurate portrayal of the respondents' opinion of this question. This is due to the effect that the number of "no opinion" answers (17) and, to a lesser extent, the number of "strongly disagree" answers (8) have on the mean value. The fact that there are over twice as many agreements as disagreements to this question indicates that the general rate of agreement is actually more than slight.

Question 4 ("Unit pricing information is confusing.") is negatively related to question 2. However, as the frequency distribution shows, there may be a perceived difference between "hard to read" and confusing. Where 40 respondents disagreed that unit pricing labels are easy to read, 33 respondents think unit pricing information is confusing. Perhaps, to these 7 respondents, once the labels are read,

unit pricing is easy to understand, or they just don't want to admit to their confusion. The latter seems to be a more likely answer, as the "neither agree nor disagree" category increased by 6 in this question, and the disagreeing answers increased by only 1.

The distribution of answers to this question is quite wide with a standard deviation of 1.91. The mean response of 2.12 indicates an overall response of slight disagreement.

On question 5 ("I do not completely understand how to use unit pricing.") respondents display a moderate to slight disagreement. The concept that you either understand unit pricing or you don't arises here, as 42 respondents strongly disagreed. Those who don't understand may not want to admit their ignorance. This may account for the 4 responses of strong agreement and the fairly even distribution of responses (between 7 and 17) between moderately agree and moderately disagree.

The mean of 3.97 for question 6 ("Unit pricing has helped me save money on my grocery purchases.") indicates an average response of slight agreement. In this case, the mean does not give an accurate indication of the strength of the agreement. This is displayed by the comparison of the number of agreements to the number of disagreements. Seventy-three respondents agreed to the statement, while only 19 disagreed. This is an indication that an agreement rate stronger than "slight" actually occurred.

A wide distribution of answers showing a tendency towards slight agreement is characteristic of the answers to questions 7 and 8 ("Brand name is an important indicator of quality when buying food products."and "Brand name is an important indicator of quality when buying non-food products."). If the brand name was found to be much more important when buying food and non-food products, the role of unit pricing might be minimized to a certain extent.

As the use of unit pricing may prolong the shopping trip, question 9 ("I enjoy grocery shopping because I often meet some of my friends and talk with them.") was designed to determine if this would be a restricting factor. The mean of 2.17 indicates that the respondent slightly disagreed to this statement. It is evident that this assumption is not accurate after studying the frequency distribution. Forty-two out of the 56 respondents who disagreed to the statement disagreed strongly. Thirty-one respondents agreed to the statement. The large number of "no opinion" answer (23) influenced the mean value to take a more central position, reflecting a slight rate of disagreement by the respondents. A more accurate summary of the response would tend to lean towards "moderate disagreement." This is an indication that the time element may restrict the use of unit pricing to some extent.

Question 10 ("I always make my purchase selection according to my favorite brand name, regardless of price.") was

intended to measure the influence of brand preference on the final buying decision. The mean of 1.56 indicates that the respondents show a slight to moderate disagreement to this statement. When compared with the frequency distribution, the mean value is seen to be a conservative estimate. Eighty-four respondents disagreed to the statement, with 45 disagreeing strongly. Only 23 respondents agreed to the statement. This shows that brand name is not an overwhelming influence on the purchase decision and suggests the possible presence of a favorable shopper attitude towards price as a purchase decision determinant.

Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.") was designed to indicate what the present usage of unit pricing may be. The mean of 3.39 indicates a slight rate of agreement by the respondents to this statement. However, the frequency distribution reveals that the rate of agreement may be more than slight. Fifty-eight respondents agree to the statement while only 26 disagree. The mean has taken a more central position mostly because of the large number of respondents who disagreed strongly (17). The large number of "no opinion" answers (18) also helped in influencing the mean into a conservative position.

Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.") was also designed to indicate what the present use of unit pricing may be. As

in question 11, the mean (3.77) indicated a slight rate of agreement to the question by the respondents. However, the number of respondents who answered in strong disagreement (17) forced the mean value to take a conservative position. When studying the frequency distribution, it can be seen that 69 respondents answered in agreement, while only 26 disagreed. These figures show that the rate of agreement should take a more moderate position than indicated by the mean. Agreement to this statement is stronger than the rate of agreement displayed in question 11. This suggests that the use of unit pricing results in the switching of sizes more often than in the switching of brands.

Question 13 ("Grocery shopping is boring and time consuming.") was designed to determine if the prolonging of the shopping trip, possibly inherent in the use of unit pricing, would be a restricting factor. After studying the returned questionnaires, it was evident that this statement was confusing. By stating that "grocery shopping is boring and time consuming," the respondent is asked to give one reply to two different statements. For something to be time consuming does not necessitate that it be boring also. A very wide and equal distribution of answers is shown, with 25 respondents agreeing and 25 disagreeing. The mean of 2.82 does show a slight tendency towards agreement. The results of this statements do not show limitation in the usage of unit pricing.

Questions 14-18 were designed to investigate the level of price consciousness of the food shopper. The mean of 3.91 for question 14 ("Before going grocery shopping I always check the newspaper grocery advertisements for specials.") indicates that the respondents show a slight rate of agreement. This mean value does not give a highly accurate portrayal of the respondents' position on this question. When studying the frequency distribution to this question, it can be seen that 71 respondents agreed while only 26 disagreed. The high number of respondents who strongly disagreed to this statement (13) again forced the mean towards a central position. A more accurate indication of the response would tend towards moderate agreement. This gives an indication of some presence of price consciousness.

The mean of 4.64 for question 15 ("I always try to redeem coupons to reduce the price I pay for grocery products.") indicates a moderate rate of agreement. The relatively small standard deviation of 1.66 shows a large concentration of answers in the agreement segment of the continuum. This statement again indicates a relatively high degree of price consciousness.

The mean of 4.78 for question 16 ("Before going grocery shopping I always prepare a shopping list.") indicates a moderate rate of agreement by the respondents. This is another indication that the shopper has a high degree of price consciousness.

The mean of 5.25 and standard deviation of 1.28 for question 17 ("When grocery shopping I frequently compare prices before making my selections.") shows a strong rate of agreement. Again it is apparent that the price appears to be a dominant factor in the purchasing decision.

Question 18 ("In general, grocery prices are too high.") was designed to measure the food shopper's general attitude towards prices. As was expected, the mean of 5.07 and standard deviation of 1.46 shows a highly concentrated discontent towards the high prices of grocery products. This is another indication of a favorable atmosphere for the use of unit pricing.

Summary

The responses to the preceding statements provide some evidence that unit pricing has influenced food shopping behavior. The respondents tend to agree that unit price labels make shopping easier and less time consuming as well as helping to save money on grocery purchases. They also show a tendency to switch the quantities, and to a lesser extent, the brands of the purchased items because of unit pricing.

On the average, the respondents appear to have an understanding of unit pricing. The open ended question (#1) displayed a relatively large number of accurate definitions of unit pricing. The respondents also answered in agreement that unit pricing labels are easy to read and answered in

disagreement that unit pricing information is confusing.

The general climate displayed by the respondents' attitudes related to the purchase decision is conducive for the increased use of unit pricing. In questions dealing with the importance of brand name, it is seen that it is not the only factor in the final purchase decision. This gives the variable of price an important role in the decision making process. The respondents also display a high amount of preparation before and during the shopping trip in order to save money. This preparation, as well as a strong opinion that grocery product prices are too high, indicates a high degree of price consciousness in the respondents.

Table 3-3

Distribution of Responses to Questions 19 Through 25

Question Number	Always[2]	Most of the Time	Half of the Time	Some-times	Never	Mean	Stan-dard Devia-tion
19	11	34	22	25	12	2.07	1.21
20	13	15	11	30	35	1.43	1.41
21	25	22	12	21	25	2.00	1.53
22	26	38	12	14	13	2.49	1.34
23	27	30	9	27	17	2.20	1.45
24	5	12	7	38	48	0.98	1.17
25	2	4	4	58	42	0.78	0.83

[2]The assigned scale values range from 4 for the "Always" category to 0 for the "Never" category.

Questions 19-23. The next 5 statements were intended to measure the frequency of the use of unit pricing. A wide distribution of responses was given for question 19 ("I use unit price information for all groceries that I buy.") (Table 3-3). The mean of 2.07 indicates that the average respondent is aware of using unit pricing a little more than "half the time." In some cases unit pricing may be used by the respondent without his actually being aware of its presence. This is examined in question 20 and 21.

The mean of 1.43 for question 20 ("I use unit price information when I buy dairy products, such as milk, poultry or fish products.") indicates an average response of "sometimes" to "half of the time." This question gives insight to the degree of understanding of unit pricing by the food shopper. For the majority of dairy products, shoppers have always used unit pricing. Package sizes for these items are divided into multiple units, such as half pints, pints, quarts, and half gallons. The 65 respondents (63% of the sample size) who answered "never" and "sometimes" may not have a strong definition of unit pricing.

The distribution of responses to question 21 are almost symmetrical ("I use unit pricing information when I buy meat, poultry or fish products."), with the mean of 2.00 indicating an average response of "half of the time." Although not as subtle as dairy products, meat, poultry and fish products have long employed unit pricing. Most delicatessen items

are sold by multiples of the pound. In many supermarkets, those items not in the delicatessen department have displayed unit pricing tickets for a long time before unit pricing legislation. It is again possible that a strong definition of unit pricing is missing for those respondents who gave low frequency answers.

The mean of 2.49 for question 22 ("I use unit price information when I buy canned food products.") indicates an average usage of unit pricing in this category as between "half of the time" and "most of the time." This frequency of usage is higher than any other product category studied. In connection with statements 20 and 21, where unrealized use of unit pricing occurs, it can be said that the greatest conscientious application of unit pricing involves canned goods.

The responses to question 23 ("I use unit price information when I buy non-food items such as cleaning and paper products.") show an average frequency of usage in this category as a little more than "half of the time." This may be an indication that food shoppers are more price conscious when shopping for food items than when shopping for non-food items.

Questions 24 ("I visit several grocery stores on each grocery shopping trip.") and 25 ("I visit several non-grocery stores on each grocery shopping trip.") were not directly relevant to the information sought in this thesis.

Summary

A lower frequency of use of unit pricing was reported for dairy, meat, poultry and fish products than for the other product categories. Because of the nature of these products, higher usage of unit pricing is actually the case here. However, there are two explanations why the respondents don't relate the use of unit pricing to these products. First, in those items such as canned goods and non-food items, systematic labeling is employed on each item. As the law does not require unit pricing labels for items packaged in equally intervalled sizes, these labels are not employed when the shopper chooses dairy and meat products. The identification of unit pricing with the unit pricing labels may result in the low response reported to the dairy and meat items. The second factor deals with the function unit pricing takes in the various grocery categories. In canned goods and non-food items, a wide array of competitive items are offered to the food shopper. In this case, the shopper uses unit pricing to compare prices of the competing brands. In dairy and meat items, brand competition is minimal. There may be only a few brands of milk or cheese and most probably only one brand of eggs or sirloin steak. Unit pricing here is mostly employed to make choices between the quantities of the various items. In this context, the food shopper may believe that this method of comparison is not unit pricing.

Although recorded usage rates are not extremely high in

any category, a great majority of respondents do consciously employ unit pricing to some extent. Perhaps, with more practice, ease of use of unit pricing will evolve and unit pricing will subsequently be a more important factor in the purchasing decisions of grocery shoppers.

Table 3-4

Distribution of Responses to Demographic Questions

Question Number						
	Age					
1	Under 30	30-39	40-49	50-59	60-69	70 and above
	44	25	8	11	11	7
	Total Family Income							
2	Under $5000	$5000-5999	$6000-7499	$7500-9999	$10000-14999	$15000-19999	$20000-24999	Over $25000
	17	1	6	12	26	10	11	13
	Number of Years of Education					
3	0-8	9-11	High School Graduate	Some College	College Graduate	Graduate Work
	0	5	15	28	29	30
	Your Spouse's Occupation						
4	Professional	White Collar	Manual Labor	Housewife	Student	No Spouse	Retired or Deceased
	32	14	11	4	10	33	6
	Your Occupation						
5	Professional	White Collar	Manual Labor	Housewife	Student	No Answer	Retired
	24	17	4	26	24	7	8

Demographic Profile of the Respondents

Age. As shown in Table 3-4, 65% of the respondents are 39 years old or younger. This relatively young age segment is further exemplified by the fact that 41% of those responding are under 30. The principal reason for this age bias is the close proximity of the sample to universities and colleges. A more balanced distribution of ages would give results more indicative for the whole population of food shoppers.

Income. The income levels of the respondents are widely dispersed. The distribution of income is fairly consistent with the total population of the United States, although the sample does have a slightly higher rate of high income families.[1] This even distribution of income levels is not indicative of an even distribution of the variables that tend to accompany income. As we have seen, a large portion of the sample are young, and are either making little or no money because they are just starting out in their careers. It also follows that these people, if married, will have smaller families to feed compared to the older elements of the population. Thus, it can be seen that the sample's apparent alignment to the universe for the distribution of

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[1]Statistical Abstract of the United States, U.S. Department of Congress, Bureau of the Census, 1972, p. 322, Table No. 523.

income does not as closely reflect an accurate dispersement of the social implications involved with each income level.

Education. Fifty-five percent of the respondents are at least college graduates. This concentration of higher educated respondents is above the general population's education level.[2] This discrepancy also discredits the responses of many lower income families discussed above, because of the lack of the accompanying social implications. It is frequently the case that low income and low education go hand in hand. As unit pricing's success involves consumer education, those who have already obtained extensive education would be more receptive to it. This bias will tend to make the findings more optimistic than they would be with a more accurate sample.

Marital Status. A possible total of 39 respondents are not married, which indicates that they probably only shop for themselves, or maybe one or two other persons. This finding is indicative of the large proportion of young respondents. Since they have no families to shop for, their shopping bills will be smaller and perhaps they will be less price conscious than their counterparts with families. The

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[2]Statistical Abstract, ibid., p. 112, Table No. 169.

[3]All responses to this question that were left blank or slashed were interpreted as having "no spouse." It may have been that some of these non-answers meant that the spouse was unemployed.

largest occupational category (over twice as many as any other occupational category) was "professional" with 32 responses. This sustains the high socio-economic bias displayed in the preceding demographic variables treated.

Occupation. There is an equal distribution of the respondent's occupation between "professional" (24), "housewife" (26), and "student" (24). The "professional" and "student" categories combine to show a high percentage of higher educated shoppers. Indicative of the responses given to demographic question No. 3, which deals with education levels, many of the "housewives" may also be higher educated shoppers.

Summary. Because of the geographical limitations of the sample size, a biased sample was drawn. It tends to be younger, relatively richer and far more educated than the universe of all food shoppers. The bias is not totally restrictive, however, as the distribution of responses are varied enough to run effective cross tabulations.

Relationship of Demographic Variables to
Responses of Question 2
("Unit pricing labels are easy to read.")

Age. A negative relationship exists between age and the percantage of agreement to the statement that unit pricing labels are easy to read. A 63% agreement occurs within the 39 years or younger grouping, while a 32% agreement is recorded in the 40 years and above grouping (Table 3-5).

Total family income. There is no significant trend present. A high rate of agreement is reached in the $7500-$9000 income level (92%) (Table 3-6).

Number of years of education. A gradual rise in agreement is evident as education level rises (Table 3-7).

Spouse's occupation. There is no trend present. A high rate of agreement is present in students (80%) (Table 3-8).

Respondent's occupation. There is no trend present. A high rate of agreement is present for students (67%) (Table 3-9).

Summary. The greatest ease in reading unit pricing labels occurs in the young segments of the sample. A large cross-segment of this population is students, or relatively recent graduates. Conversely, those having the hardest time interpreting the labels are older, and, generally, the least educated segment of the sample.

Table 3-5

Distribution of Response by Age of Respondent to Question 2 ("Unit pricing labels are easy to read.")

Age	Agree	%[2]	Disagree	%	No Opinion	%
Under 30	28	62.2	14	31.1	3	6.7
30-39	16	64.0	7	28.0	2	8.0
40-49	3	37.5	3	37.5	2	25.0
50-59	2	18.2	7	63.6	2	18.2
60-69	5	45.5	6	54.5	0	0.0
70 and above	2	28.6	4	57.1	1	14.3
Total	56	52.3	41	38.3	10	9.4

[2]Row percentages add to 100%

Table 3-6

Distribution of Response by Total Family Income of Respondent to Question 2 ("Unit pricing labels are easy to read.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	8	47.0	8	47.0	1	6.0
$5000-$5999	1	100.0	0	0.0	0	0.0
$6000-$7499	4	66.6	2	33.4	0	0.0
$7500-$9999	11	91.7	1	8.3	0	0.0
$10000-$14999	13	50.0	10	38.5	3	11.5
$15000-$19999	5	50.0	4	40.0	1	10.0
$20000-$24999	4	36.4	5	45.5	2	18.1
over $25000	5	38.5	7	53.8	1	7.7
Total	51	53.2	37	38.5	8	8.3

Table 3-7

Distribution of Response by Number of Years of Education of Respondent to Question 2 ("Unit pricing labels are easy to read.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
9-11	3	60.0	1	20.0	1	20.0
High School Graduate	7	63.6	1	9.1	3	27.3
Some College	13	46.4	10	35.7	5	17.9
College Graduate	17	58.6	12	41.4	0	0.0
Graduate Work	16	53.3	13	43.3	1	3.4
Total	56	54.4	37	35.9	10	9.7

Table 3-8

Distribution of Response by Spouse's Occupation to Question 2 ("Unit pricing labels are easy to read.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	16	50.0	14	43.8	2	6.2
White Collar	8	57.1	5	35.7	1	7.2
Manual Labor	7	63.6	2	18.2	2	18.2
Housewife	2	50.0	1	25.0	1	25.0
Student	8	80.0	1	10.0	1	10.0
No Spouse	14	42.4	16	48.5	3	9.1
Retired or Deceased	2	33.3	3	50.0	1	1.7
Total	57	51.8	42	38.2	11	10.0

Table 3-9

Distribution of Response by Respondent's Occupation to Question 2 ("Unit pricing labels are easy to read.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	11	37.9	7	36.8	1	5.3
White Collar	8	38.1	10	47.6	3	14.3
Manual Labor	3	75.0	1	25.0	0	0.0
Housewife	15	55.6	9	33.3	3	11.1
Student	16	66.7	7	29.2	1	4.1
Retired	2	28.6	5	71.4	0	0.0
No Answer	2	25.0	3	37.5	3	37.5
Total	57	51.9	42	38.2	11	10.0

Relationship of Demographic Variables to Responses of Question 4 ("Unit pricing information is confusing.")

Age. There is no trend present. The percentage of agreement to the statement is relatively proportionate in all age groups (Table 3-10).

Total family income. There is no trend present. The only group agreeing to this statement is the over $25,000 income level (69%) (Table 3-11).

Number of years of education. There is no trend present. The percentage of agreement is relatively proportionate in all education levels (Table 3-12).

Occupation. There is no trend present for either the respondents' or spouses' occupations (Tables 3-13 and 3-14).

Summary. As this statement is considered as being negatively related to the previous one (question number 2), the results may be expected to be conversely proportionate. This is so in the 39 years and under grouping. The older groupings tend to show that they believe unit pricing labels are not easy to read, but they are not confusing, either. It is possible that the physical presentation of unit pricing is the cause for some of the existing confusion.

Table 3-10

Distribution of Response by Age of Respondent to Question 4 ("Unit pricing information is confusing.")

Age	Agree	%	Disagree	%	No Opinion	%
Under 30	14	31.1	25	35.6	6	13.3
30-39	9	36.0	13	52.0	3	12.0
40-49	1	12.5	4	50.0	3	37.5
50-59	4	36.4	4	36.4	3	27.3
60-69	3	27.3	7	63.6	1	9.1
70 and above	2	28.6	4	57.1	1	14.3
Total	33	30.8	57	53.3	17	15.9

Table 3-11

Distribution of Response by Total Family Income of Respondent to Question 4 ("Unit pricing information is confusing.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	3	17.6	11	64.8	3	17.6
$5000-$5999	0	0.0	1	100.0	0	0.0
$6000-$7499	3	50.0	3	50.0	0	0.0
$7500-$9999	2	16.7	9	75.0	1	8.3
$10000-$14999	8	30.8	14	53.8	4	15.4
$15000-$19999	4	40.0	4	40.0	2	20.0
$20000-$24999	1	9.1	7	63.6	3	27.3
Over $25000	9	69.2	4	30.8	0	0.0
Total	30	31.3	53	55.2	13	13.5

Table 3-12

Distribution of Response by Number of Years of Education of Respondent to Question 4 ("Unit pricing information is confusing.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
9-11	0	0.0	2	40.0	3	60.0
High School Graduate	4	26.7	8	53.3	3	20.0
Some College	9	32.1	12	42.9	7	25.0
College Graduate	10	34.5	17	58.6	2	6.9
Graduate Work	9	30.0	19	63.3	2	6.7
Total	32	29.9	58	54.2	17	15.9

Table 3-13

Distribution of Response by Spouse's Occupation to Question 4 ("Unit pricing information is confusing.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	10	31.3	19	59.4	3	9.3
White Collar	5	39.7	6	42.9	3	21.4
Manual Labor	5	45.5	4	36.4	2	18.1
Housewife	0	0.0	3	75.0	1	25.0
Student	1	10.0	8	80.0	1	10.0
No Spouse	10	30.3	18	54.5	5	15.2
Retired or Deceased	2	33.3	2	33.3	2	33.4
Total	33	30.0	60	54.5	17	15.5

Table 3-14

Distribution of Response by Respondent's Occupation to Question 4 ("Unit pricing information is confusing.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	9	37.5	15	62.5	0	0.0
White Collar	6	35.3	7	41.2	4	23.5
Manual Labor	0	0.0	1	25.0	3	75.0
Housewife	7	26.9	13	50.0	6	23.1
Student	7	29.2	15	62.5	2	8.3
No Answer	2	28.6	4	57.1	1	14.3
Retired	2	25.0	5	62.5	1	12.5
Total	33	30.0	60	54.5	17	15.5

Relationship of Demographic Variables
to Responses of Question 5
("I do not completely understand
how to use unit pricing.")

Age. There is no trend present (Table 3-15).

Total family income. There is no trend present (Table 3-16).

Number of years of education. There is a negative relationship between the level of education and the percentage of agreement. The lowest level of agreement is in the "graduate work" group (7%) (Table 3-17).

Spouse's occupation. There is no trend present. The lowest level of agreement is in the "no spouse" category (14%) (Table 3-18).

Respondent's occupation. The "professional" grouping and the "retired" grouping (comprised of only 8 responses) registers the lowest rate of agreement, at 12%. The other groups are fairly constant at a rate ranging from 25% to 30% agreement (Table 3-19).

Summary. Those who best understand how to use unit pricing are highly educated and members of households where the wage-earner is professionally occupied. This is in agreement with the Safeway and Kroger studies.

All groups were high in their understanding of unit pricing, as the overall average agreement to this statement is only 20%.

Table 3-15

Distribution of Response by Age of Respondent to Question 5 ("I do not completely understand how to use unit pricing.")

Age	Agree	%	Disagree	%	No Opinion	%
Under 30	10	22.2	33	73.3	2	4.5
30-39	6	24.0	15	60.0	4	16.0
40-49	1	12.5	6	75.0	1	12.5
50-59	1	9.1	7	63.6	3	27.3
60-69	2	18.2	8	72.7	1	9.1
70 and above	2	28.6	2	28.6	3	42.8
Total	22	20.6	71	66.4	14	13.0

Table 3-16

Distribution of Response by Total Family Income of Respondent to Question 5 ("I do not completely understand how to use unit pricing.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	4	23.5	11	64.7	2	11.8
$5000-$5999	1	100.0	0	0.0	0	0.0
$6000-$7499	2	33.3	4	66.7	0	0.0
$7500-$9999	1	8.3	10	83.4	1	8.3
$10000-$14999	7	26.9	18	69.2	1	3.9
$15000-$19999	1	10.0	8	80.0	1	10.0
$20000-$24999	1	9.1	7	63.6	3	27.3
Over $25000	4	30.8	7	53.8	2	15.4
Total	21	21.9	65	67.7	10	10.4

Table 3-17

Distribution of Response by Number of Years of Education of Respondent to Question 5 ("I do not completely understand how to use unit pricing.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
8-11	1	20.0	2	40.0	2	40.0
High School Graduate	5	33.3	7	46.7	3	20.0
Some College	8	28.6	17	60.7	3	10.7
College Graduate	5	17.2	19	65.6	5	17.2
Graduate Work	2	6.7	27	90.0	1	3.3
Total	21	19.6	72	67.3	14	13.1

Table 3-18

Distribution of Response by Spouse's Occupation to Question 5 ("I do not completely understand how to use unit pricing.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	8	25.0	20	62.5	4	12.5
White Collar	4	28.6	8	57.1	2	14.3
Manual Labor	4	36.4	7	63.6	0	0.0
Housewife	0	0.0	3	75.0	1	25.0
Student	2	20.0	7	70.0	1	10.0
No Spouse	4	12.1	25	75.8	4	12.1
Retired or Deceased	0	0.0	3	50.0	3	50.0
Total	22	20.0	73	66.3	15	13.6

Table 3-19

Distribution of Response by Respondent's Occupation to Question 5 ("I do not completely understand how to use unit pricing.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	3	12.5	20	83.3	1	4.2
White Collar	3	17.6	12	70.6	2	11.8
Manual Labor	0	0.0	3	75.0	1	25.0
Housewife	9	34.6	11	42.3	6	23.1
Student	6	25.0	17	70.8	1	4.2
No Answer	0	0.0	5	71.4	2	28.6
Retired	1	12.5	5	62.5	2	25.0
Total	22	20.0	73	66.4	15	13.6

Relationship of Demographic Variables to Responses of Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Age. There is no trend present (Table 3-20).

Total family income. A level of agreement of more than 50% does not occur until the $7500-$9999 income group. In each successive income group, agreement is constant. Agreement is especially high in the $10,000-$14,999 group (18%) (Table 3-21).

Number of years of education. A positive relationship exists between the levels of education and the percentage of agreement. A high level of agreement occurs in the "graduate work" group (83%) (Table 3-22).

Spouse's occupation. The only group to show a lower than 50% rate of agreement is the "white collar" category (29%). The highest level of agreement is in the "manual labor" category (91% with only 11 respondents). The next highest level of agreement is the "professional" group (78%). The other occupational categories are constant at around 60% (Table 3-23).

Respondent's occupation. Once again, the "white collar" category shows a relatively low percentage of agreement (47%). The professional group shows the highest level of agreement (79%) (Table 3-24).

Summary. The lower income groups ($7499 and under) acknowledge the least amount of benefit from unit pricing. The

higher educated, higher income, professional families seem to have benefitted the most by using unit pricing.

Table 3-20

Distribution of Response by Age of Respondent to Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Age	Agree	%	Disagree	%	No Opinion	%
Under 30	28	62.2	6	13.3	11	24.5
30-39	16	64.0	8	32.0	1	4.0
40-49	3	37.5	3	37.5	2	25.0
50-59	2	18.2	7	63.6	2	18.2
60-69	5	45.5	6	54.5	0	0.0
70 and above	2	28.6	4	57.1	1	14.3
Total	56	52.3	34	31.8	17	15.9

Table 3-21

Distribution of Response by Total Family Income of Respondent to Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	8	47.1	5	29.4	4	23.5
$5000-$5999	0	0.0	1	100.0	0	0.0
$6000-$7499	3	50.0	2	33.3	1	16.7
$7500-$9999	8	66.7	1	8.3	3	25.0
$10000-$14999	21	80.0	1	3.8	4	15.4
$15000-$19999	7	70.0	1	10.0	2	20.0
$20000-$24999	8	72.7	1	9.1	2	18.2
Over $25000	8	61.5	5	38.5	0	0.0
Total	63	65.6	17	17.7	16	16.7

Table 3-22

Distribution of Response by Number of Years of Education of Respondent to Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
8-11	4	80.0	1	20.0	0	0.0
High School Graduate	7	46.6	4	26.7	4	26.7
Some College	16	57.1	8	28.6	4	14.3
College Graduate	18	62.1	5	17.2	6	20.7
Graduate Work	25	83.3	2	6.7	3	10.0
Total	70	65.4	20	18.7	17	15.9

Table 3-23

Distribution of Response by Spouse's Occupation to Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	25	78.1	3	9.4	4	12.5
White Collar	4	28.6	7	50.0	3	21.4
Manual Labor	10	90.9	0	0.0	1	9.1
Housewife	3	75.0	1	25.0	0	0.0
Student	6	60.0	2	20.0	2	20.0
No Spouse	20	60.6	6	18.2	7	21.2
Retired or Deceased	4	66.7	2	33.3	0	0.0
Total	72	65.5	21	19.1	17	15.4

Table 3-24

Distribution of Response by Respondent's Occupation to Question 6 ("Unit pricing has helped me save money on my grocery purchases.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	19	79.2	1	4.2	4	16.6
White Collar	8	47.1	5	29.4	4	23.5
Manual Labor	3	75.0	1	25.0	0	0.0
Housewife	19	73.1	5	19.2	2	7.7
Student	16	66.7	3	12.5	5	20.8
No Answer	3	42.9	3	42.9	1	14.2
Retired	4	50.0	3	37.5	1	12.5
Total	72	65.5	21	19.1	17	15.4

Relationship of Demographic Variables to Responses of Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Age. A negative relation exists between age and the frequency of brand changing. Sixty-four percent of those respondents 39 years and under agree, where only 32% of those 40 years old and over agree (Table 3-25).

Total family income. A level of agreement of more than 50% does not occur until the $7500-$9999 income level. In each successively higher income group the rate of agreement is over 50% (Table 3-26).

Number of years of education. A level of agreement of more than 50% only occurs in the "college graduate" and "graduate work" levels (68%). In the combined categories preceding "college graduate," a 33% level of agreement is recorded (Table 3-27).

Spouse's occupation. The highest level of agreement is the "professional" group (63%). The lowest level of agreement is in the "white collar" group (29%). The other occupation categories border around the 50% level of agreement (Table 3-28).

Respondent's occupation. The occupation with the highest level of agreement is the "student" (66%). The "white collar," "manual labor," and "retired" categories show rates of agreement of less than 50% (Table 3-29).

Summary. There is a tendency for the younger respondents to switch brands because of unit pricing more than the older respondents. Most of the respondents who switch brands have a total family income of $7500 a year or more. The higher educated respondents show a higher frequency of switching than those respondents with less extensive educations. Students and professionally occupied respondents switch brands more than the respondents in the remaining occupational categories.

Table 3-25

Distribution of Response by Age of Respondent to Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Age	Agree	%	Disagree	%	No Opinion	%
Under 30	28	62.2	10	22.2	7	15.6
30-39	17	68.0	5	20.0	3	12.0
40-49	2	25.0	2	25.0	4	50.0
50-59	4	36.4	6	54.5	1	9.1
60-69	3	27.3	6	54.5	2	18.2
70 and above	3	42.9	4	57.1	0	0.0
Total	57	53.3	33	30.8	17	15.9

Table 3-26

Distribution of Response by Total Family Income of Respondent to Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	8	47.1	7	41.2	2	11.7
$5000-$5999	0	0.0	1	100.0	0	0.0
$6000-$7499	1	16.7	5	83.3	0	0.0
$7500-$9999	8	66.7	4	33.3	0	0.0
$10000-$14999	17	65.4	4	15.4	5	19.2
$15000-$19999	6	60.0	1	10.0	3	30.0
$20000-$24999	6	54.5	2	18.2	3	27.3
Over $25000	7	53.8	6	46.2	0	0.0
Total	53	55.2	30	31.3	13	13.5

Table 3-27

Distribution of Response by Number of Years of Education of Respondent to Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
8-11	2	40.0	2	40.0	1	20.0
High School Graduate	5	33.3	6	40.0	4	26.7
Some College	9	32.1	15	53.6	4	14.3
College Graduate	18	62.1	6	20.7	5	17.2
Graduate Work	22	73.3	5	16.7	3	10.0
Total	56	52.3	34	31.8	17	15.9

Table 3-28

Distribution of Response by Spouse's Occupation to Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	20	62.5	5	15.6	7	21.9
White Collar	4	28.6	9	64.3	1	7.1
Manual Labor	7	63.6	3	27.3	1	9.1
Housewife	1	25.0	3	75.0	0	0.0
Student	6	60.0	3	30.0	1	10.0
No Spouse	16	48.5	9	27.3	8	24.2
Retired or Deceased	4	66.7	2	33.3	0	0.0
Total	58	52.7	34	30.9	18	16.4

Table 3-29

Distribution of Response by Respondent's Occupation to Question 11 ("I have changed brands of purchased grocery products because of unit pricing information.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	14	58.3	3	12.5	7	29.2
White Collar	7	41.2	9	52.9	1	5.9
Manual Labor	1	25.0	0	0.0	3	75.0
Housewife	14	53.8	9	34.6	3	11.6
Student	16	66.7	6	25.0	2	8.3
No Answer	3	42.8	2	28.6	2	28.6
Retired	3	37.5	5	62.5	0	0.0
Total	58	52.7	34	30.9	18	16.4

Relationship of Demographic Variables to Responses of Question 12 ("I have frequently changes my usual purchase quantities because of unit pricing.")

Age. Except for the 50-59 age group, which records a 73% level of agreement, a trend exists where the younger respondents are more apt to agree than the older ones. A 66% agreement is reached for those under 40 years old, while a 54% agreement is recorded for those over 40 years old (table 3-30).

Total family income. A level of agreement of over 50% is not reached until the $7500-$9999 income level. In each successive income group, agreement is over 50% (Table 3-31).

Number of years of education. A level of agreement of over 50% only occurs in the "college graduate" and "graduate work" levels (76%). In the categories preceding "college graduate," a 44% level of agreement is recorded (Table 3-32).

Spouse's occupation. The only agreement level under 50% occurs in the "white collar" grouping (43%). The highest level of agreement occurs in the "professional" category (69%) (table 3-33).

Respondent's occupation. The only categories with agreement under 50% are "white collar" (41%) and "retired" (38%). The highest level of agreement is in the "professional" category (88%) (Table 3-34).

Summary. Those respondents who shift the quantities purchased because of unit pricing are very similar to those

who change brands because of unit pricing. Although the age factor is not as important in this case, the shopper who shifts the quantities purchased because of unit pricing is probably under 40 years old. Most of the respondents who switched quantities have a total family income of $7500 a year or more. The higher educated respondents show a higher frequency of switching quantities than those respondents with less extensive educations. Professionally occupied respondents display the highest percentage of switching quantities of the occupational categories.

Table 3-30

Distribution of Response by Age of Respondent to Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.")

Age	Agree	%	Disagree	%	No Opinion	%
Under 30	28	62.2	12	26.7	5	11.1
30-39	18	72.0	7	28.0	0	0.0
40-49	4	50.0	2	25.0	2	25.0
50-59	8	72.7	2	18.2	1	9.1
60-69	5	45.5	4	36.4	2	18.1
70 and above	3	42.9	4	57.1	0	0.0
Total	66	61.7	31	29.0	10	9.3

Table 3-31

Distribution of Response by Total Family Income of Respondent to Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.")

Total Family Income	Agree	%	Disagree	%	No Opinion	%
Under $5000	7	41.2	8	47.1	2	11.7
$5000-$5999	0	0.0	1	100.0	0	0.0
$6000-$7499	3	50.0	3	50.0	0	0.0
$7500-$9999	7	58.3	5	41.7	0	0.0
$10000-$14999	21	80.8	3	11.5	2	7.7
$15000-$19999	8	80.0	1	10.0	1	10.0
$20000-$24999	7	63.6	1	9.1	3	27.3
Over $25000	8	61.5	5	38.5	0	0.0
Total	61	63.5	27	28.2	8	8.3

Table 3-32

Distribution of Response by Number of Years of Education of Respondent to Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.")

Number of Years of Education	Agree	%	Disagree	%	No Opinion	%
0-8	0	0.0	0	0.0	0	0.0
8-11	2	40.0	2	40.0	1	20.0
High School Graduate	6	40.0	7	46.7	2	13.3
Some College	13	46.4	10	35.7	5	17.9
College Graduate	20	69.0	7	24.1	2	6.9
Graduate Work	25	83.3	5	16.7	0	0.0
Total	66	61.7	31	29.0	10	9.3

Table 3-33

Distribution of Response by Spouse's Occupation to Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.")

Spouse's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	22	68.8	6	18.8	4	12.4
White Collar	6	42.9	8	57.1	0	0.0
Manual Labor	8	72.7	2	18.2	1	9.1
Housewife	3	75.0	1	25.0	0	0.0
Student	5	50.0	4	40.0	1	10.0
No Spouse	21	63.6	8	24.2	4	12.2
Retired or Deceased	4	66.7	2	33.3	0	0.0
Total	69	62.7	31	28.2	10	9.1

Table 3-34

Distribution of Response by Respondent's Occupation to Question 12 ("I have frequently changed my usual purchase quantities because of unit pricing.")

Respondent's Occupation	Agree	%	Disagree	%	No Opinion	%
Professional	21	87.5	0	0.0	3	12.5
White Collar	7	41.2	8	47.1	2	11.7
Manual Labor	2	50.0	2	50.0	0	0.0
Housewife	15	57.7	9	34.6	2	7.7
Student	16	66.7	5	20.8	3	12.5
No Answer	5	71.4	2	28.6	0	0.0
Retired	3	37.5	5	62.5	0	0.0
Total	69	62.7	31	28.2	10	9.1

Relationship of Demographic Variables to Responses of Question 19 ("I use unit price information for all groceries that I buy.")

Age. A negative relationship exists between the age and high frequency of use. Of those respondents 49 years old and under, 65% use unit pricing "half the time" or more. Only 48% of those respondents 50 years old and above answered in this manner (Table 3-35).

Total family income. A significant level of usage is not reached until the $7500-$9999 income level (Table 3-36).

Number of years of education. A positive relationship exists between education level and high frequency of use. Of those respondents in the "college graduate" and "graduate work" categories, 69% use unit pricing "half the time" or more. In the categories preceding "college graduate," only 48% answered in this manner (Table 3-37).

Spouse's occupation. The two categories to answer "sometimes" or "never" are "retired or deceased" (81%) and "white collar" (57%). Eighty-one percent of those respondents in the "professional" category use unit pricing "half the time" or more. The remaining categories show only a slight tendency to use unit pricing "half of the time" or more (Table 3-38).

Respondent's occupation. The only category to respond favorably to "sometimes" or "never" is the "retired" (75%). The "students" (79%) and the "professionals" (66%) register the highest frequency of use (Table 3-39).

Summary. Age seems to be the major limiting factor in the use of unit pricing. This is indicated where the lowest frequency of usage occurs in the "retired" category. There is a tendency for younger respondents to use unit pricing more than older respondents. Most of the respondents who display high usage have a total family income of $7500 a year or more. The higher educated respondents show a higher rate of usage than those respondents with less extensive educations. Students and professionally occupied respondents show a higher usage rate than respondents in the remaining occupational categories.

Table 3-35

Distribution of Response by Age of Respondent to Question 19 ("I use unit price information for all groceries that I buy.")

Age	Half the Time and More	%	Sometimes or Never	%
Under 30	28	62.2	17	37.8
30-39	17	68.0	8	32.0
40-49	6	75.0	2	25.0
50-59	7	63.6	4	36.4
60-69	5	45.5	6	54.5
70 and above	2	28.6	5	71.4
Total	65	60.7	42	39.3

Table 3-36

Distribution of Response by Total Family Income of Respondents to Question 19 ("I use unit price information for all groceries that I buy.")

Total Family Income	Half the Time and More	%	Sometimes or Never	%
Under $5000	9	52.9	8	47.1
$5000-$5999	0	0.0	1	100.0
$6000-$7499	2	33.3	4	66.7
$7500-$9999	9	75.0	3	25.0
$10000-$14999	15	57.7	11	42.3
$15000-$19999	7	70.0	3	30.0
$20000-$24999	7	63.6	4	36.4
Over $25000	9	69.2	4	30.8
Total	58	60.4	38	39.6

Table 3-37

Distribution of Response by Number of Years of Education of Respondent to Question 19 ("I use unit price information for all groceries that I buy.")

Number of Years of Education	Half the Time and More	%	Sometimes or Never	%
0-8	0	0.0	0	0.0
8-11	3	60.0	2	40.0
High School Graduate	4	26.7	11	73.3
Some College	16	57.1	12	42.9
College Graduate	20	69.0	9	31.0
Graduate Work	21	70.0	9	30.0
Total	64	59.8	43	40.2

Table 3-38

Distribution of Response by Spouse's Occupation to Question 19 ("I use unit price information for all groceries that I buy.")

Spouse's Occupation	Half the Time and More	%	Sometimes or Never	%
Professional	26	81.3	6	18.7
White Collar	6	42.9	8	57.1
Manual Labor	5	45.5	6	54.5
Housewife	3	75.0	1	25.0
Student	6	60.0	4	40.0
No Spouse	17	51.5	16	48.5
Retired or Deceased	3	18.8	13	81.2
Total	66	60.0	44	40.0

Table 3-39

Distribution of Response by Respondent's Occupation to Question 19 ("I use unit price information for all groceries that I buy.")

Respondent's Occupation	Half the Time and More	%	Sometimes or Never	%
Professional	16	66.7	8	33.3
White Collar	10	58.8	7	41.2
Manual Labor	4	100.0	0	0.0
Housewife	14	53.8	12	46.2
Student	19	79.2	5	20.8
No Answer	1	14.3	6	85.7
Retired	2	25.0	6	75.0
Total	66	60.0	44	40.0

Summary

Raw frequencies of the responses, along with the accompanying mean scores and standard deviations, were calculated for each question. The resulting analysis shows that unit pricing has had a definite influence on shopping behavior. It also shows that the sample is younger, more affluent and more educated than the population from which it was drawn. Crosstabulations between key awareness and usage questions and the demographic data were then executed. It was found that the younger respondents displayed a higher rate of awareness and usage of unit pricing than the older respondents. The more affluent respondents are more aware and show a higher usage rate of unit pricing than the less affluent respondents. Those respondents displaying higher levels of education are more aware and show a higher usage rate of unit pricing than those respondents with less extensive educations. Those respondents in professional occupations show a higher percentage of awareness and usage of unit pricing than the remaining occupational categories.

C H A P T E R IV

SUMMARY AND CONCLUSIONS

Unit pricing is an attempt to help clarify the purchase decision of the food shopper by simplifying price comparisons. This clarification is a much needed reform, as grocery shoppers have had to contend with confusing labeling practices and awkward package sizes. The Fair Packaging and Labeling Act of 1966 did clear up some of the confusion on the market-shelves, but on the whole fell short of its ultimate objective.

With the implementation of unit pricing, the food shopper has an increased ability to accurately compare prices. The fact that all items in the supermarket are broken down into standard units of measurement makes this comparison feasible. However, there is no real factual data attesting to the extent that unit pricing is actually used by food shoppers since the legislation of unit pricing in 1971. Going a step further, it is not known who is aware of unit pricing and, subsequently, who uses it. This thesis is an attempt to shed light on these questions as well as furnish additional data for future research.

The research done to date on the effect of unit pricing is mostly inconclusive, as it has been plagued by several limitations, the major limitation being that none of these studies were conducted where unit pricing was legislated

or tested for a significant period of time.

To gather information, a mail questionnaire was employed. Five hundred names were randomly selected from residents of three neighboring towns in central Massachusetts. The return of 110 questionnaires constitutes the sample size for analysis. The questionnaire can be divided into four categories of measurement, consisting of the awareness and usage of unit pricing, general attitudes concerning price consciousness and demographic variables. Frequency distributions were run on all the questions to elicit general profiles. Cross-tabulations were run between the responses of seven crucial questions and the demographic data to find out to what extent each segment of the population understands and uses unit pricing.

The frequency distribution give a fairly optimistic outlook in regards to the general level of understanding and usage of unit pricing. This is influenced by the high degree of price consciousness displayed by the respondents.

The results of the questions dealing with the specific categories of grocery items in which unit pricing is employed showed a basic misconception of unit pricing by a large number of respondents. This discrepancy was obtained in questions dealing with the frequency of use of unit pricing in dairy, meat, fish and poultry items. The nature of most of these items make unit pricing a necessity, as most meat prices are displayed by the pound and dairy items are

packaged by multiples of either the pint or the pound. As unit pricing labels, per se, are not displayed on dairy products, this finding may just be an oversight by the respondents. It also may be an indication that these respondents lack a strong definition of unit pricing. However, a great many respondents reply that they consciously use unit pricing to some extent. This, in itself, is optimistic, as the more the shopper becomes used to unit pricing, the easier its calculations will become, resulting in increased frequency of use.

The demographic data reveals that the sample contains a definite element of bias. The average respondents is younger, more affluent, and has a much higher level of education than the average food shopper. A very high frequency of respondents are in professional occupations. This bias tends to add uncertainty to the optimism displayed from the results of the previous frequency distributions.

The cross-tabulations clarify the suspicions above, that because of the demographic characteristics of the sample, an overly optimistic interpretation of the frequency distributions resulted. The results of these cross tabulations show that a fairly consistent trend exists among the various demographic classifications and the level of understanding and usage of unit pricing displayed by the respondents. It was found that the younger respondents display a higher rate of awareness and usage of unit pricing than the older respondents.

The more affluent respondents are more aware and show a higher usage rate of unit pricing than the less affluent respondents. Those respondents displaying higher levels of education are more aware and show a higher usage rate of unit pricing than those respondents with less extensive educations. Those respondents in professional occupations show a higher percentage of awareness and usage of unit pricing than the remaining occupational categories.

It is clearly the case that those food shoppers who stand to benefit the most from unit pricing are from the lower socio-economic strata of society. As those who understand and benefit the most from unit pricing are from the upper socio-economic strata of society, a major discrepancy occurs. Those who need the benefits of unit pricing the most are being affected by it the least. Definite action should be taken to reach these people. The primary course of action should be in the field of education. Once non-users of unit pricing are educated to what unit pricing does and how easy it is to use, there is a good chance that he or she will become a user. As a great many lower income, lower educated food shoppers come from the inner city, great amounts of energy should be expended in these areas. As it is difficult to reach this group of food shoppers, one suggestion would be to start the education process in the supermarket itself. By the use of very simple instructive signs situated repeatedly throughout the store, it would be hard

for the food shoppers not to grasp the significance of unit pricing. Two potential problems do arise, however. First, many inner city shoppers may shop in small "corner stores," where unit pricing is not employed. In this case, an understanding of unit pricing would not benefit them. Second, this method of education is going to have to rely on the initiative of the supermarket industry. To a small extent, this practice is being utilized by Stop & Shop, Inc. They display in their advertising campaigns comparative prices between shopping carts of store brand items (with the prices of individual items included) and of national brand items. This may be extended to compare low unit price items to high unit priced items to dramatically display how much money can be saved through unit pricing.

The major significance of this study lies in that for the first time since the legislation of unit pricing in 1971, some of its implications on food shopping behavior have been investigated. This insight as to the present state of awareness of unit pricing, as well as its usage patterns by food shoppers, is beneficial to those who are directly involved with its regulation. This should furnish valuable insight as to what revisions, if any, should be made in the present policy concerning the successful execution of unit pricing. If the government policy makers hesitate to make a strong effort to reach the lower socio-economic food shoppers, then consumer councils should use this study to help pressure them

into the appropriate actions, i.e., increased efforts to educate these people in the use of unit pricing.

The major limitation of this study deals with the high socio-economic nature of the sample. With a more equal distribution of respondents, the results would be more conclusive. As the study was conducted in three neighboring towns, the bias in the sample population is facilitated. A statewide survey would eliminate this bias and either fortify these results or discredit them. Other limitations arise from the nature of the information gathering device. Those who respond to mail questionnaires are volunteering their information, making the sample biased in that it eliminates an element of randomness from the sample. There was no additional contact made with the non-respondents to elicit their response.

Summary

The optimistic outlook reflected by analysis of frequency distributions of responses may not be completely warranted. This optimism is displayed through the high level of understanding and usage of unit pricing, as well as the high frequency of price consciousness displayed by the respondents. However, as the sample is largely composed of members of the relatively higher socio-economic strata of society, this favorable response is not as illuminating as it could be. That is the major limitation of the study. As it is strongly

suspected that the lower socio-economic level of shoppers are benefiting the least from unit pricing, a strong education program should be enacted.

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The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

Business Administration
Department of Marketing

March 25, 1973

Dear Shopper:

Would you please fill out the enclosed questionnaire and return it to me, using the stamped envelope provided, as soon as possible.

I am a graduate student at the University of Massachusetts, writing my master's thesis on "The Effects of Unit Pricing on Food Shopping Behavior." Part of my study involves conducting a survey among the shoppers in the Northampton-Amherst area to determine their reactions to unit pricing. The questionnaire should be answered by the person who does the majority of food shopping for the household.

My thesis advisor is Professor Kent B. Monroe of the School of Business Administration.

Please answer the questionnaire as accurately as possible. Any assistance you give me will be greatly appreciated.

Sincerely,

Ronald Fishman

Ronald Fishman

Center for Business and Economic Research
School of Business Administration
University of Massachusetts
Amherst, MA 01002

RF/sk

Enclosure

Directions: This questionnaire should be answered by the person who normally does the majority of the food shopping.

1. In your own words please describe what unit pricing means to you. _____

_____

_____

The following statements are concerned with the way you shop for groceries and the feelings you have about grocery shopping. Please indicate the degree that you agree or disagree with the statement by placing an "X" in the interval that matches your feeling.

2. Unit pricing labels are easy to read.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

3. Unit pricing labels make shopping easier and less time consuming.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

4. Unit pricing information is confusing.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

5. I do not completely understand how to use unit pricing.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

6. Unit pricing has helped me save money on my grocery purchases.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

7. Brand name is an important indicator of quality when buying food products.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

8. Brand name is an important indicator of quality when buying non-food products.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

9. I enjoy grocery shopping because I often meet some of my friends and talk with them.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

10. I always make my purchase selection according to my favorite brand name, regardless of price.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

11. I have changed brands of purchased grocery products because of unit pricing information.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

12. I have frequently changed my usual purchase quantities (larger or smaller package sizes of grocery products) because of unit pricing.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

13. Grocery shopping is boring and time consuming.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

14. Before going grocery shopping I always check the newspaper grocery advertisements for specials.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

15. I always try to redeem coupons to reduce the price I pay for grocery products.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

16. Before going grocery shopping I always prepare a shopping list.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

17. When grocery shopping I frequently compare prices before making my selections.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

18. In general, grocery product prices are too high.

Strongly Agree	Moderately Agree	Slightly Agree	Neither Agree Nor Disagree	Slightly Disagree	Moderately Disagree	Strongly Disagree

Please answer the next seven questions in the same manner as those just answered. However, you will be indicating your <u>degree of use</u> instead of your feelings.

19. I use unit-price information for all groceries that I buy.

Always	Most of the Time	Half of the Time	Sometimes	Never

20. I use unit-price information when I buy dairy products, such as milk, cheese, eggs, butter or margerine.

Always	Most of the Time	Half of the Time	Sometimes	Never

21. I use unit-price information when I buy meat, poultry, or fish products.

Always	Most of the Time	Half of the Time	Sometimes	Never

22. I use unit-price information when I buy canned food products.

23. I use unit-price information when I buy non-food items such as cleaning and paper products.

Always	Most of the Time	Half of the Time	Sometimes	Never

24. I visit several grocery stores on each grocery shopping trip.

Always	Most of the Time	Half of the Time	Sometimes	Never

25. I visit several non-grocery stores on each grocery shopping trip.

Always	Most of the Time	Half of the Time	Sometimes	Never

Please fill in the blanks in the following questions.

26. I do the majority of my grocery shopping at _____ store.

27. I travel about _____ miles one way to this grocery store.

28. On the average, I spend $_____ each week for groceries.

29. On the average, it usually takes me about _____ minutes to complete my grocery shopping in the store (for the major shopping trip).

The following questions are optional.

1. Your age: under 30___ 30-39___ 40-49___ 50-59___ 60-69___ 70-above___

2. Total Family Income: under $5,000___ $5,000-$5,999___ $6,000-$7,499___ $7,500-$9,999___ $10,000-$14,999___ $15,000-$19,999___ $20,000-$24,999___ over $25,000___

3. Number of years of education: 0-8___ 9-11___ high school graduate___ some college___ college graduate___ graduate work___

4. Your spouse's occupation:

5. Your occupation:

Thank you for your cooperation. Please return this questionnaire as soon as possible to:

Ronald Fishman
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